NEW YORK ACADEMY OF MEDICINE.

Meeting of December 18, 1890.

The President, Dr. A. L. LOOMIS, in the chair.

The proceedings at the last stated meeting of the Academy of Medicine comprised the consideration of certain lesions of the visual tract from the eyeball to the cerebral cortex. In this relation Dr. C. S. BULL read a paper on

PAPILLITIS.

After going over the regional anatomy of the retina, giving a terse clinical history of papillitis and of the pathological changes connected therewith, Dr. Bull expressed the opinion that the most common cause of papillitis was intracranial disease, and that of the intracranial lesions tumor was the most frequent. The frequency and severity of the papillitis did not seem to be materially influenced by either the nature, the size or the location of the tumor.

The next most frequent cause was meningitis, then followed abscess of the brain, hydatid disease and softening from thrombosis or embolism. Papillitis was also occasionally met with in acute diseases of the spinal cord. The author then gave a synopsis of the various views as to causation which have been from time to time held and promulgated by distinguished authorities. In summarizing his own consideration of the subject, the speaker said that optic neuritis, limited to or most intense in the optic disc, might occur without any apparent intracranial disease. Pure papillitis was known to occur in simple anæmia. It seemed therefore fair to conclude that the intraocular end of the optic nerve was a structure peculiarly prone to inflammation. It was a difficult matter to connect papillitis with increase of intracranial pressure, for it was the rare exception in chronic hydrocephalus, where the intracranial pressure was raised to the highest point of which we had any knowledge. On the other hand, in cases of intracranial tumor with papillitis there might be no sign of increased intracranial pressure during the life of the patient. There might also be signs of increased intracranial pressure in cases of tumor without papillitis. If we rejected the theory that pressure on the cavernous sinuses was the immediate cause, we could not absolutely ignore its influence on the retinal circulation. The great distention of the veins and the narrowing of the arteries took place mainly when the inflammation had reached a high degree of intensity, and these facts pointed to the inflammation in the nerve as the cause of the strangulation by pressure on the vessels. This view was confirmed by pathological investigations. The conspicuous constriction of the vessels was always in the papilla in front of the sclerotic. The most intense signs of strangulation might be seen in cases in which there was no reason to suspect the presence of intracranial disease. Distention of the optic sheath was frequently met with in cases of tumor with papillitis. It might also be absent in cases of tumor with internal hydrocephalus. It had been suggested that the fluid might be found within the sheath itself. If the sheath was the main lymph channel by which the fluid was conveyed from the eye, its distention in optic neuritis by a fluid escaping from the papilla was easily understood. But there was good ground for believing that the fluid found in the sheath passed into it from the subarachnoid space. He really knew very little of the relation which might exist between dropsy of the sheath and optic neuritis. The occasional occurrence of papillitis without it showed that it was neither the invariable nor the chief mechanical cause of papillitis.

It therefore seemed proper to draw the inference that we could not decide in any given case against the existence of a descending neuritis from examination of a small portion of the trunk of the optic nerve, and that a pathological change in the nerve deviating but slightly from the normal state might convey a condition of irritation to the eye which was sufficient to set up actual papillitis. It also seemed proper to draw the following conclusions in regard to the development of papillitis in intracranial disease:

1. In cases of cerebral tumor, evidence of descending inflammation might be traced in the sheath or nerve much more commonly than was generally supposed, while in cases of meningitis the evidence of descending inflammation was almost invariable.

2. The resulting papillitis might be slight or might grow intense, but we are ignorant of the causes which brought about this difference.

3. The mechanical congestion in these cases of papillitis did not always result from compression of the vessels behind the sclerotic ring, but always followed compression from inflammatory exudation in the papilla.

4. Slow increase of intracranial pressure had no effect on the retinal vessels, but the sudden increase of such pressure might intensify a papillitis originating in some other way.

5. Distention of the sheath alone was probably not sufficient to cause papillitis by its mechanical effects, but it might intensify the process otherwise set up.

ORBITAL OPTIC NEURITIS, INCLUDING ALCOHOL AND TOBACCO AMAUROSIS.

This was the title of Dr. H. Knapp's paper. He said that the cases in which people noticed a haze, a blur, even a perfectly dark patch in the centre of their field of vision, known under the name of central amblyopia or central scotoma, as well as those cases in which persons lost their sight in one or a few days without exhibiting any ocular or general disease to account for it, were explained more than twenty years ago by A. v. Graefe and Theo. Leber. They supposed the condition to be an inflammation of the orbital parts of the optic nerve, retrobulbar neuritis. This hypothesis had since been proven to be a reality by anatomical investigations. Retrobulbar neuritis might be idiopathic or the result of different kinds of intoxication, alcoholism, nicotinism, lead poisoning, diabetes, syphilis, etc. The condition might take on an acute or chronic form.

A number of very interesting microscopic specimens were exhibited to the Society. One showed the central interstitial neuritis in the period of nuclear infiltration, another in the stage of connective tissue hypertrophy. The process was characteristic by the limitations of its area of inflammation, circumscribed and triangular near the disc. In one specimen the changes passed like a band from the temporal border of the nerve across to the nasal side. This explained how the atrophy of the nerve might become total. In all of the specimens a certain number of healthy nerve-fibres were seen preserved in the atrophic parts. This showed how, in alcoholism, that total blindness was rare, and how, on the other hand, that, in the field of vision of persons blind from retrobulbar neuritis, islets of useful sight were permanently preserved. Retrobulbar optic neuritis presented an example of peripheric neuritis of great practical importance.